

Environmentally related taxes Taxes on energy use

BETTER POLICIES FOR BETTER LIVES

Centre for Tax Policy and Administration

Revenue from environmentally related taxes in China¹

As a share of GDP, China has the 6th lowest environmentally related tax revenue among 34 OECD and 5 partner economies. In 2014, environmentally related tax revenues were at 1.16% of GDP, compared to 2.0% on average among the 39 countries.

In China, taxes on energy represented 48% of total environmentally related tax revenue, compared to 70% on average among the 39 countries.

Environmentally related tax revenue as a percentage of GDP, 2014 Motor vehicles Other

¹Data from OECD.Stat include all OECD countries (except Latvia) and Argentina, Brazil, China, India and South Africa. Please see OECD.Stat for country specific notes.

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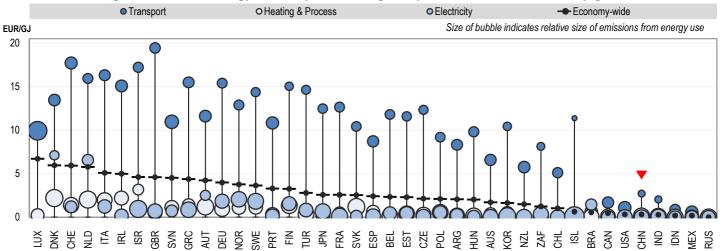
Taxes on energy use in China²

The OECD's Taxing Energy Use (2015) publication compares taxes on energy use (excise and carbon taxes) across 34 OECD and 7 partner economies. The chart below shows average tax rates, expressed in EUR per GJ, by sector across all fuels and the economy-wide average. The bubble size represents the weight of the sector in total energy use.

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- China has higher average tax rates on transport fuels (2.7 EUR/GJ) than on fuels used for heating and process purposes (0.14 EUR/GJ) or electricity generation (0 EUR/GJ);
- China has the 5th lowest tax rate on energy on an economy-wide basis, at EUR 0.32 per GJ, compared with EUR 2.7 per GJ on a simple-average basis across the 34 OECD and 7 partner economies.

Average tax rates on energy in transport, heating and process use, and electricity generation



²Data from Taxing Energy Use are for 2012 and include all OECD countries (except Latvia) and Argentina, Brazil, China, India, Indonesia, Russia and South Africa.

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Effective Carbon Rates

Pricing CO, through taxes and emissions trading systems

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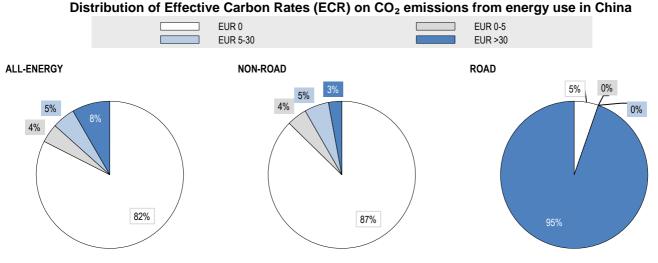
Effective carbon rates in China

The OECD's Effective Carbon Rates (2016) publication presents the combined price signal on CO₂ emissions from taxes on energy and emissions trading systems (ETS), or the effective carbon rate (ECR).³ The charts below show shares of CO₂ emissions subject to different price ranges, for road, non-road and all emissions from energy use. EUR 30 is a conservative estimate of the climate damage from one tonne of CO₂ emissions.

In China, 82% of carbon emissions from energy use face no price signal at all; 13% face a price at or above EUR 5 per tonne of CO₂; and 8% face a price at or above EUR 30 per tonne of CO₂. This compares to a zero price for 60% of emissions across all countries, a price at or above EUR 5 per tonne for 30% and at or above EUR 30 per tonne for 10% of emissions.

Excluding road use, 87% of carbon emissions from energy use in China face no price signal at all; 8% face a price at or above EUR » 5 per tonne of CO₂; and 3% face a price at or above EUR 30 per tonne of CO₂. This compares to a zero price for 70% of emissions

across all countries, a price at or above EUR 5 per tonne for 19% and at or above EUR 30 per tonne for 4% of emissions.



Figures shown in the charts may not add up to 100% due to rounding.

³Notes on the interpretation of effective carbon rates: Box 3.1 (p.38-40), OECD's Effective Carbon Rates (2016), or consult http://oe.cd/ECRinterpretation

CO₂ emissions priced and average rates in China

The table below shows the average price signals from taxes and trading systems, and the share of emissions priced by these instruments.

- » There are seven subnational ETS in China, which had an average permit price of EUR 4.69 (on average) per tonne of CO₂ in 2014.
- In total, taxes in China price 8% of CO₂ emissions from energy use; and the ETS cover 9%. The sectors with the highest tax coverage are road transport (95%) and agriculture and fisheries (56%). The sectors with the highest price coverage by the ETS are electricity (13%) and industry (10%).

Share of emissions priced and average price signals from tax & ETS, China

| | CO ₂ emissions by sector (in t CO ₂) | Tax Average price Chara of | | Average price Chara of | | Overlap of tax | Emissions not priced |
|--------------------------|---|--|---------------------------|--|---------------------------|----------------------|----------------------|
| | | Average price (in EUR/tCO ₂) | Share of emissions priced | Average price (in EUR/tCO ₂) | Share of emissions priced | and ETS ⁵ | by tax or ETS |
| Agriculture & Fishing | 85 602 | 38.5 | 56% | 0.0 | 0% | 0% | 44% |
| Electricity | 3 741 048 | 33.7 | 0% | 5.5 | 13% | 0% | 87% |
| Industry | 3 773 129 | 35.1 | 3% | 4.7 | 10% | 0% | 87% |
| Offroad transport | 129 287 | 36.3 | 51% | 0.0 | 0% | 0% | 49% |
| Residential & Commercial | 1 382 815 | 36.0 | 4% | 4.6 | 2% | 0% | 95% |
| Road transport | 572 329 | 44.3 | 95% | 0.0 | 0% | 0% | 5% |
| Total ⁴ | 9 684 211 | 3.5 | 8% | 0.5 | 9% | 0% | 82% |

Access the data for all 41 countries:

http://oe.cd/emissionsdata

⁴Total average prices are weighted by the share of emissions in each sector that is priced in the country.

⁵Tax and ETS can apply to the same emissions base. The overlap describes the percentage of emissions in a sector that is priced by both tax and ETS.